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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,048	12/21/2000	Yoshihiro Yamaguchi	0879-0295P	5515

2292 7590 03/23/2007

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EXAMINER	
HERNANDEZ, NELSON D	
ART UNIT	**PAPER NUMBER**
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/23/2007.

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Office Action Summary	Application No.	Applicant(s)	
	09/741,048	YAMAGUCHI, YOSHIHIRO	
	Examiner	Art Unit	
	Nelson D. Hernandez	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *28 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-19,22-25,27,28,30-44 and 47-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9,19,25,27,28,30-34,48,50,53 and 55* is/are allowed.

6)☒ Claim(s) *1-4,7,8,10-18,22-24,35-44,47,49,51,52,54 and 56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/26/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. /.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Examiner acknowledges the amended claims filed on December 28, 2006. Claims 1, 9, 10-15, 22-25, 27, 28, 30-34, 40-44 and 47-51 have been amended. Claims 5-6, 20-21, 26, 29, 45 and 46 have been canceled. Claims 52-56 have been newly added.

Response to Arguments

2. Applicant's arguments with respect to claims 40-44 and 51 have been considered but are moot in view of the new ground(s) of rejection.

3. In the Office Action mailed on August 10, 2006, the Examiner indicated that claims 45 and 46 have allowable subject matter and would be allowable if written in independent form including all of the limitations of the base claim and any intervening claims. In the response to the Office Action filed on December 28, 2006, the Applicant amended the claims as indicated in the Office Action. However, upon further considerations new grounds of rejections have been made to claims 1 and 10.

Claim Objections

4. **Claims 27, 30 and 31** objected to because of the following informalities: in the present amendment, claims 27, 30 and 31 appear to be dependent from claim 26, and claim 26 has been canceled. Are claims 27, 30 and 31 dependent from claim 25. For

examiner purposes claims 27, 30 and 31 are going to be read as dependent from claim 25. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4, 8, 9, 16, 19, 47 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945 and Belucci et al., Patent 5,913,542 B1 in view of Yamamoto et al., JP 06-123197 A and further in view of Matsugu, US Patent 6,987,535 B1.

Regarding claim 1, Nishikawa discloses an identification photo system (Fig. 2) that obtains image data for an identification photo of a person (Fig. 2: 22) from image data of the person, said identification photo system comprising an automatic correcting device (Fig. 2) that automatically corrects the image data of the person (Col. 3, line 66 – col. 4, line 13; col. 6, lines 40-56; col. 9, lines 42-65).

Nishikawa does not explicitly teach that the automatic correcting device detects a background area in said image data, compares a size of the person area in said image data with a predetermined size, and changes the size of an image based on the size of the person area so that the size of the person area is the predetermined size; an area separating device that separates the image into a person area and a background area;

a background changing device that changes colors of the background area to a predetermined color; an abstracting device that abstracts a print area required for the identification photo from the image according to the size of the image, and, that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, Belucci teaches a system for producing ID cards wherein the system separates the image area from the background area from the subject area (Belucci teaches automatically normalizing or eliminating the background of the image to be captured (see col. 4, lines 8-19 and col. 5, lines 15-36), doing so inherently teaches detecting the background area, since the background has to be detected prior to normalizing, having the color changed or deleting) so as to compress the image data for the identification card (Col. 4, lines 8-19), as part of the compression algorithm, the background is changed to a predetermined color (normalized or eliminated), also teaches resizing the size of the image separated of said subject so as to fit the area required for the photo of the ID card (Col. 5, lines 15-49). The system in Belucci separates the image area from the background area so as to compress the image data for the identification card (Belucci, Col. 4, lines 8-19), as part of the compression algorithm, the system changes the background to a predetermined color (normalized or eliminated), also has a software to automatically resize the images so as to fit the required area for the photo (Belucci, Col. 5, lines 15-49).

Therefore, taking the combined teaching of Nishikawa in view of Belucci as a whole, it would have been obvious to one of ordinary skilled in the art at the time the

invention was made to modify the identification photo system by detecting a background area in the image data and abstracting a person area based on the background area and having means to separate a person area and a background area and a background color-changing means to change the color of the background to a predetermined color, with the identification photo system having an area separating device that separates the image into a person area and a background area; a background changing device that changes colors of the background area to a predetermined color; an abstracting device that abstracts a print area required for the identification photo from the image according to the size of the image.

The motivation to do so would have been to help the identification photo system to compress the image of the person only since the background is not that relevant as suggested by Belucci (Col. 4, lines 8-19).

The combined teaching of Nishikawa in view of Belucci fails to teach comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size and that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, Yamamoto teaches an identification photo system (See figs. 1 and 3) that obtains image data for an identification photo of a person (See fig. 5: 50a) from image data of the person, said identification photo system comprising: an automatic correcting (Fig. 1: 33) device that automatically corrects the image data of the person,

wherein said automatic correcting abstracts a person area (See Translation, page 4, ¶ 0014), compares a size of the person area in said image data with a predetermined size, and changes the size of an image based on the size of the person area so that the size of the person area is the predetermined size (See translation, page 2, ¶ 0006 – page 3, ¶ 0007; page 4, ¶ 0014 and ¶ 0019 – page 5, ¶ 0020). Comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size is advantageous because it would produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification, such as a passport and a license.

Therefore, taking the combined teaching of Nishikawa in view of Belucci and further in view of Yamamoto et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nishikawa and Belucci by comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size. The motivation to do so would have been to produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification as suggested by Yamamoto (See Translation, page 2, ¶ 0001).

The combined teaching of Nishikawa in view of Belucci and further in view of Yamamoto et al. fails to teach that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, Matsugu teaches a digital camera (See fig. 1), comprising a plurality of physically integrated devices to edit a captured image, wherein said devices include an area-separating device (Fig. 1: 36) to extract and object being photographed from the background (Col. 4, lines 15-33); a background changing device (Matsugu teaches removing the detected background; also teaches changing the background of an image; col. 5, line 51 – col. 7, line 57); also teaches an abstracting device that abstracts an area of an object (See figs. 3: 52 and fig. 19; in figs 20-22, Matsugu teaches editing the face of a person, wherein the area of the face is detected in relation with the area of a template to add different types of beard; col. 16, line 44 – col. 17, line 58) required to modify a composite image (Col. 4, lines 15-33; col. 5, line 51 – col. 7, line 57; col. 16, line 44 – col. 17, line 58).

Although Matsugu does not explicitly disclose that the devices in the camera are used to make an identification of a person, the devices are reasonably pertinent to the devices used for the creation of an identification card. Therefore, one of ordinary skill in the art would find obvious to modify the concept of having a system as in Nishikawa, Belucci and Yamamoto et al. to make identification cards to have the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera as shown in Matsugu. The motivation to do so would improve the portability of the system so that the identification photo system can be easily carried to different locations by a single person and would also reduce the cost of producing the system using a computer since the functions would be carried by the camera CPU.

Regarding claim 2, Nishikawa discloses that the automatic correcting device corrects at least one of density, color balance, luminance and saturation of an image of the person (Col. 5, lines 56-65; col. 6, lines 47-66).

Regarding claim 3, Nishikawa discloses that the automatic correcting device comprises: a skin pigmentation area abstracting device (detection point setting unit in fig. 2: 52) that abstracts a skin pigmentation area from the image; a skin pigmentation correction value calculating device (comparator in fig. 2: 58) that calculates skin pigmentation correction values according to colors of the skin pigmentation area abstracted by said skin pigmentation area abstracting device and a predetermined skin pigmentation correction target value (stored in standard color memory in fig. 2: 56); and a color correcting device (look-up table in fig. 2: 60) that corrects the colors of the skin pigmentation area according to the skin pigmentation correction values calculated by said skin pigmentation correction value calculating device (the look-up table is used to correct the colors based on the result of the comparator) (Col. 3, line 66 – col. 4, line 13; col. 5, line 66 – col. 6, line 7).

Regarding claim 4, Nishikawa discloses the same in claim 3. Therefore, grounds for rejecting claim 3 apply here. Furthermore, Nishikawa teaches performing a complexion conversion the colors of the image stored in memory (Fig. 2: 30) according to a preferable complexion (Col. 5, line 66 – col. 6, line 7).

Regarding claim 8, Nishikawa discloses the identification photo system comprising a printer (Fig. 2: 34) that prints the identification photo from the image data for the identification photo (Col. 3, lines 43-51).

Regarding claim 9, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu teaches an apparatus performing the same as in claim 1 and 3. Therefore, grounds for rejecting claim 1 and 3 apply here.

Regarding claim 16, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu as applied to claim 1 teaches that the automatic correcting device is configured to determine the person area as being an area of the image data other than the background area (See Belucci, col. 4, lines 8-19 and col. 5, lines 15-36).

Regarding claim 47, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu as applied to claim 1 teaches a selection device configured to allow a user to select the predetermined size from a plurality of predetermined person area sizes, wherein in the automatic correcting device changes the image of the person so that the size of the person area is the selected predetermined size (See Yamamoto, Translation, pages 2-3, ¶ 0007; see also page 2, ¶0002). Grounds for rejecting claim 1 apply here.

Regarding claim 52, limitations can be found in claim 1.

7. Claims 10-15, 22, 49 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945, Belucci, Patent 5,913,542 B1 and Yamamoto et al., JP 06-123197 A in view of Fujimoto, US Patent 6,035,074 and further in view of Matsugu, US Patent 6,987,535 B1.

Regarding claim 10, Nishikawa discloses an image processing system (Fig. 2A) for generating identification image data from an original image data of a person (Fig. 2: 22), said identification photo system comprising an automatic correcting device (Fig. 2) that automatically corrects the image data of the person (Col. 3, line 66 – col. 4, line 13; col. 6, lines 40-56; col. 9, lines 42-65).

Nishikawa does not explicitly teach an abstracting device configured to determine a person area of the original image data based on a background area; an image size correcting device configured to change a size of the person area based on a predetermined image size; an image data generating device configured to generate the identification image data based on the changed sized person area such that the identification image data includes a cut guidance area within a print area, wherein the cut guidance area is smaller than the print area and that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, Belucci teaches an image processing system (Fig. 2A) for generating identification image data from an original image data of a person (See image of the person in fig. 2: 52), comprising: an abstracting device configured to determine a person area of the original image data based on a background area (Belucci teaches

normalizing or eliminating the background of the image to be captured to obtain only the person area; see col. 4, lines 8-19 and col. 5, lines 15-36); Belucci also teaches resizing the image so as to fit the area required for the photo of the ID card; and an image data generating device (Fig. 2: 51) configured to generate the identification image data based on the changed sized image area (col. 4, lines 8-19 and col. 5, lines 15-36).

Therefore, taking the combined teaching of Nishikawa in view of Belucci as a whole, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the identification photo system by detecting a background area in the image data and abstracting a person area based on the background area and having means to separate a person area and a background area and a background color-changing means to change the color of the background to a predetermined color and by including means for changing the size of a photo to a predetermined size. The motivation to do so would have been to help the identification photo system to compress the image of the person only since the background is not that relevant and can be changed and to adjust the size of the image so as to fit the area required for the photo as suggested by Belucci (Col. 4, lines 8-19).

The combined teaching of Nishikawa in view of Belucci fails to teach changing a size of the person area to a predetermined person area size based on the size of the person area abstracted by the abstracting device and generating the identification image data based on the changed sized person area such that the identification image data includes a cut guidance area within a print area, wherein the cut guidance area is smaller than the print area and that the area separating device, the background

changing device, and the abstracting device are all physically integrated into a single camera.

However, Yamamoto teaches an identification photo system (See figs. 1 and 3) that obtains image data for an identification photo of a person (See fig. 5: 50a) from image data of the person, said identification photo system comprising: an automatic correcting (Fig. 1: 33) device that automatically corrects the image data of the person, wherein said automatic correcting abstracts a person area (See Translation, page 4, ¶ 0014), compares a size of the person area in said image data with a predetermined size, and changes the size of an image based on the size of the person area so that the size of the person area is the predetermined size (See translation, page 2, ¶ 0006 – page 3, ¶ 0007; page 4, ¶ 0014 and ¶ 0019 – page 5, ¶ 0020). Comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size is advantageous because it would produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification, such as a passport and a license.

Therefore, taking the combined teaching of Nishikawa in view of Belucci and further in view of Yamamoto as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nishikawa and Belucci by comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size. The motivation to do so would have been to

produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification as suggested by Yamamoto (See Translation, page 2, ¶ 0001).

The combined teaching of Nishikawa in view of Belucci and further in view of Yamamoto fails to teach that the identification image data includes a cut guidance area within a print area, wherein the cut guidance area is smaller than the print area and that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, in the same field of endeavor, Fujimoto discloses an image processing apparatus in communication with a camera or a scanner (Col. 2, lines 59-65; col. 6, lines 3-9; col. 7, lines 24-31), said camera comprising an external input controlling section (Fig. 3: 15) for the camera or scanner, wherein said image processing apparatus extract the face of a subject in the image using face recognition by comparing the colors in the whole input image (See figs. 6-10) with skin colors stored in a RAM (Fig. 3: 11) or ROM (Fig. 3: 12), the image processing apparatus also comprises a frame forming section (Fig. 4: 11-7) for forming a frame having a size such that the face image pickup area can be embraced in the frame in response to the designation of the face image pickup area; and a face image cutting section (Fig. 4: 11-4) for cutting out an area enclosed in the frame, wherein the recognized face image is cut out in accordance with the size of the face image; Fujimoto also discloses that the method can be applied to ID photography (See col. 4, lines 12-24; col. 12, line 65 – col. 13, line 3) (Col. 1, line

64 – col. 2, line 29; col. 3, line 26 – col. 5, line 23; col. 6, lines 3-53; col. 7, line 24 – col. 8, line 4; col. 8, line 46 – col. 9, line 64; col. 12, line 49 – col. 13, line 3).

Therefore, taking the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Fujimoto as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate the identification image data based on the changed sized person area such that the identification image data includes a cut guidance area within a print area, wherein the cut guidance area is smaller than the print area. The motivation to do so would have been to help the identification photo system to create ID photography without taking a photograph of the single human object as suggested by Fujimoto (Col. 4, lines 19-23) and to make sure that most of the image area for the ID card is covered by the person's face.

The combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Fujimoto fails to teach that the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera.

However, Matsugu teaches a digital camera (See fig. 1), comprising a plurality of physically integrated devices to edit a captured image, wherein said devices include an area-separating device (Fig. 1: 36) to extract and object being photographed from the background (Col. 4, lines 15-33); a background changing device (Matsugu teaches removing the detected background; also teaches changing the background of an image; col. 5, line 51 – col. 7, line 57); also teaches an abstracting device that abstracts an

area of an object (See figs. 3: 52 and fig. 19; in figs 20-22, Matsugu teaches editing the face of a person, wherein the area of the face is detected in relation with the area of a template to add different types of beard; col. 16, line 44 – col. 17, line 58) required to modify a composite image (Col. 4, lines 15-33; col. 5, line 51 – col. 7, line 57; col. 16, line 44 – col. 17, line 58).

Although Matsugu does not explicitly disclose that the devices in the camera are used to make an identification of a person, the devices are reasonably pertinent to the devices used for the creation of an identification card. Therefore, one of ordinary skill in the art would find obvious to modify the concept of having a system as in Nishikawa, Belucci, Yamamoto and Fujimoto et al. to make identification cards to have the area separating device, the background changing device, and the abstracting device are all physically integrated into a single camera as shown in Matsugu. The motivation to do so would improve the portability of the system so that the identification photo system can be easily carried to different locations by a single person and would also reduce the cost of producing the system using a computer since the functions would be carried by the camera CPU.

Regarding claim 11, the combined teaching of Nishikawa, Belucci and Yamamoto view of Fujimoto and further in view of Matsugu teaches an apparatus performing the same as in claim 10. Therefore, grounds for rejecting claim 10 apply here.

Regarding claim 12, claim 12 is written as a Markush type claim by using the expression "...to correct at least one of density, color balance, luminance and

saturation" (see lines 3-4), meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

Nishikawa discloses that the automatic correcting device corrects at least one of density, color balance, luminance and saturation of an image of the person (Col. 5, lines 56-65; col. 6, lines 47-66).

Regarding claim 13, Nishikawa discloses that the automatic correcting device comprises: a skin pigmentation area abstracting device (detection point setting unit in fig. 2: 52) configured to abstract a skin pigmentation area from the original image data; a skin pigmentation correction value calculating device (comparator in fig. 2: 58) configured to calculate skin pigmentation correction values according to colors of the skin pigmentation area abstracted by said skin pigmentation area abstracting device and a predetermined skin pigmentation correction target value (stored in standard color memory in fig. 2: 56); and a color correcting device (look-up table in fig. 2: 60) configured to correct the colors of the skin pigmentation area according to the skin pigmentation correction values calculated by said skin pigmentation correction value calculating device (the look-up table is used to correct the colors based on the result of the comparator) (Col. 3, line 66 – col. 4, line 13; col. 5, line 66 – col. 6, line 7).

Regarding claim 14, the combined teaching of Nishikawa, Belucci and Yamamoto view of Fujimoto and further in view of Matsugu as applied to claim 10

teaches a head position detecting device (See Belucci, col. 5, lines 15-49; col. 4, lines 8-19 and Fujimoto, fig. 4, item 11-1, col. 1, line 64 – col. 2, line 29; col. 3, line 26 – col. 5, line 23; col. 6, lines 3-53; col. 7, line 24 – col. 8, line 4; col. 8, line 46 – col. 9, line 64; col. 12, line 49 – col. 13, line 3) configured to detect a head position of the person in the original image data; and a cut guidance generating device (Fujimoto, fig. 4, item 11-4) configured to generate a cut guidance in the print area based on the head position detected by the a head position detecting device. Therefore, grounds for rejecting claim 10 apply here.

Regarding claim 15, claim 15 is written as a Markush type claim by using the expression "... configured to outline the cut guidance area by at least one of a solid line, a broken line, marks at corners" (see line 3), meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

The combined teaching of Nishikawa, Belucci and Yamamoto view of Fujimoto and further in view of Matsugu as applied to claim 10 teaches that the cut guidance generating device is configured for outlining the cut guidance area by at least one of: a solid line, a broken line, marks at corners, and differentiating colors between the cut guidance area and a remainder of the printer area (See Fujimoto figs. 8, 9, 15, 16 and 17; col. 1, line 64 – col. 2, line 29; col. 3, line 26 – col. 5, line 23; col. 6, lines 3-53; col.

7, line 24 – col. 8, line 4; col. 8, line 46 – col. 9, line 64; col. 12, line 49 – col. 13, line 3). Grounds for rejecting claims 10 and 14 apply here.

Regarding claim 22, the combined teaching of Nishikawa, Belucci and Yamamoto view of Fujimoto and further in view of Matsugu as applied to claim 10 teaches that the abstracting device is to determine the person area as being an area of the image data other than the background area (Belucci teaches determining the person area by teaching determining the background area to be removed; col. 4, lines 8-19 and col. 5, lines 15-36).

Regarding claim 49, the combined teaching of Nishikawa, Belucci and Yamamoto view of Fujimoto and further in view of Matsugu as applied to claim 10 teaches a selection device configured to allow a user to select the predetermined person area size from a plurality of predetermined person area sizes, wherein in the image size correcting device changes the image of the person so that the size of the person area is the selected predetermined person area size (See Yamamoto, Translation, pages 2-3, ¶ 0007; see also page 2, ¶0002). Grounds for rejecting claim 10 apply here.

Regarding claim 54, limitations can be found in claim 10.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945, Belucci et al., Patent 5,913,542 B1 and Yamamoto et al., JP 06-123197 A in view of Matsugu, US Patent 6,987,535 B1 and further in view of O'Brill, Patent 5,937,081.

Regarding claim 7, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu fails to teach a cloth area-abstracting device that abstracts a cloth area from the image; and a cloth-changing device that changes image data of the cloth area to image data of predetermined cloth.

However, O'Brill teaches an image composition system wherein a camera takes an image of a person (Fig. 1: 12) and the composition system separates the image of the person's head from the body and the background (See flow chart in fig. 6) so as to change the person's clothes (i.e. shirt and pants) according to the body type of said person (Col. 5, line 49 – col. 6, line 47).

Therefore, taking the combined teaching of Nishikawa, Belucci and Yamamoto in view of Matsugu and further in view of O'Brill as a whole, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to incorporate in the identification photo system with a cloth changing system to abstract the part of the body related to the cloth's area or the body form the person so as to change the clothes of the person to predetermined clothes, with the motivation of avoiding having to require a person to have a specific type of clothes to be photograph with the system, facilitating the system to combine the subject with different accessory items as suggested by O'Brill (Col. 1, lines 56-61).

9. Claims 17, 18 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945, Belucci et al., Patent 5,913,542 B1 and Yamamoto et al., JP 06-123197 A in view of Matsugu, US Patent 6,987,535 B1 and further in view of Blank, US Patent 5,345,313.

Regarding claim 17, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu fails to teach that the automatic correcting device is configured to compare a plurality of areas of the image data with a reference background area and configured to determine each of the plurality of areas to be a part of the background area based on the comparison.

However, Blank teaches a method of detecting the background of an image, wherein the image of a person (Fig. 1: 22) is taken using a reference background (Fig. 1: 24) of a predetermined pattern and color, said background is stored in the system (Fig. 1: 10), wherein a processor (transputer shown in fig. 3: 44) compares the pixels of the image starting from the gamma of the upper left pixel with the gamma of the next pixel in the top row of the video image (Fig. 5A: 54) and so on (See fig. 4) in order to determine whether the pixel belongs to the background or to the person area (Col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

Therefore, taking the combined teaching of Nishikawa, Belucci and Yamamoto in view of Matsugu and further in view of Blank as a whole, it would have been obvious to one of ordinary skill in the art a the time the invention was made to modify the identification photo system by comparing a plurality of areas of the image data with a

reference background area and configured to determine each of the plurality of areas to be a part of the background area based on the comparison. The motivation to do so would have been to properly separate the background areas from the person's area as suggested by Blank (Col. 2, lines 36-46).

Regarding claim 18, limitations can be found in claim 17.

Regarding claim 35, the combined teaching of Nishikawa and Belucci in view of Yamamoto and further in view of Matsugu fails to teach that the automatic correcting device is configured to separate the image data into an area such that two adjoining pixels are in the same area if a difference in data between the two adjoining pixels is smaller than a predetermined threshold, calculate a characteristic value of the area, detect the background area based on the characteristic value of the area, and abstract the person area in the image data based on the background area.

However, Blank teaches a method of detecting the background of an image, wherein the image of a person (Fig. 1: 22) is taken using a reference background (Fig. 1: 24) of a predetermined pattern and color, said background is stored in the system (Fig. 1: 10), wherein a processor (transputer shown in fig. 3: 44) compares the pixels of the image starting from the gamma of the upper left pixel with the gamma of the next pixel in the top row of the video image (Fig. 5A: 54) and so on (See fig. 4) in order to determine whether the pixel belongs to the background or to the person area. Blank also teaches dividing the image into a plurality of areas (the areas are stored in the system and used to compare the pixel values to classify them as person area or background area; col. 6, lines 21-35; col. 10, lines 20-29 and lines 58-65). Blank also

teaches comparing properties of adjoining pixels of the image; and determining that the adjoining pixels belong in the same area if the compared properties of the adjoining pixels are less than predetermined thresholds for each property compared (See Blank, col. 7, line 65 – col. 8, lines 14) (Col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

Therefore, taking the combined teaching of Nishikawa, Belucci and Yamamoto in view of Matsugu and further in view of Blank as a whole, it would have been obvious to one of ordinary skill in the art a the time the invention was made to modify the identification photo system by separate the image data into an area such that two adjoining pixels are in the same area if a difference in data between the two adjoining pixels is smaller than a predetermined threshold, calculate a characteristic value of the area, detect the background area based on the characteristic value of the area, and abstract the person area in the image data based on the background area. The motivation to do so would have been to properly separate the background areas from the person's area as suggested by Blank (Col. 2, lines 36-46).

Regarding claim 36 the combined teaching of Nishikawa, Belucci and Yamamoto in view of Matsugu and further in view of Blank as applied to claim 35 teaches that the automatic correcting device is configured to detect the area as the background area if a difference in the characteristic value between a predetermined reference background area and an area adjoining the predetermined reference background area is smaller than a predetermined threshold (See Blank, col. 7, line 65 – col. 8, lines 14).

Regarding claim 37, claim 37 is written as a Markush type claim by using the expression "...the predetermined reference background area includes at least one corner area of the image data or an area out of an oval that is smaller than the image with its center at a center of the image data." (see lines 2-4), meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

The combined teaching of Nishikawa, Belucci and Yamamoto in view of Matsugu and further in view of Blank as applied to claim 35 teaches that the predetermined reference background area includes one corner area of the image data (See Blank, col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

10. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945, Belucci, Patent 5,913,542 B1, Yamamoto et al., JP 06-123197 A and Fujimoto, US Patent 6,035,074 in view of Matsugu, US Patent 6,987,535 B1 and further in view of Blank, US Patent 5,345,313.

Regarding claim 23, the combined teaching of Nishikawa, Belucci and Yamamoto in view of Fujimoto and further in view of Matsugu fails to teach that the

abstracting device is configured to determine the background area based a comparison of a plurality of areas of the image data with a reference background area.

However, Blank teaches a method of detecting the background of an image, wherein the image of a person (Fig. 1: 22) is taken using a reference background (Fig. 1: 24) of a predetermined pattern and color, said background is stored in the system (Fig. 1: 10), wherein a processor (transputer shown in fig. 3: 44) compares the pixels of the image starting from the gamma of the upper left pixel with the gamma of the next pixel in the top row of the video image (Fig. 5A: 54) and so on (See fig. 4) in order to determine whether the pixel belongs to the background or to the person area (Col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

Therefore, taking the combined teaching of Nishikawa, Belucci, Yamamoto and Fujimoto in view of Matsugu and further in view of Blank as a whole, it would have been obvious to one of ordinary skill in the art a the time the invention was made to modify the identification photo system detecting the background area comprises comparing a plurality of areas of the image data with a reference background area; and determining each of the plurality of areas to be a part of the background area based on the comparison. The motivation to do so would have been to properly separate the background areas from the person's area as suggested by Blank (Col. 2, lines 36-46).

Regarding claim 24, limitations can be found in claim 23.

11. Claims 40-42, 51 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belucci, Patent 5,913,542 B1 and Yamamoto et al., JP 06-123197 A in view of Blank, US Patent 5,345,313 and further in view of Nishimura, US Patent 5,412,487.

Regarding claim 40, Belucci discloses an image processing method in which image data for an identification photo of a person is obtained from image data of the person, the image processing method comprising the steps of; calculating a characteristic value of the area (i.e. background and person's area); detecting a background area based on the characteristic value of the area (Belucci determines the background area in order to normalize or erase it; see col. 4, lines 8-19 and col. 5, lines 15-36); and abstracting a person area in the image data based on the background area (Belucci discloses presenting the image of the person only by deleting the background area, by doing this, Belucci discloses abstracting a person area in the image data based on the background area; col. 4, lines 8-19 and col. 5, lines 15-36).

Belucci fails to teach dividing the image data into an area such that two adjoining pixels are in the same area if a difference in data between the two adjoining pixels is smaller than a predetermined threshold and sizing an image based on a size of the person area of the image data such that the size of the person area in the image is a predetermined person area size.

However, Yamamoto teaches an identification photo system (See figs. 1 and 3) that obtains image data for an identification photo of a person (See fig. 5: 50a) from image data of the person, said identification photo system comprising: an automatic

correcting (Fig. 1: 33) device that automatically corrects the image data of the person, wherein said automatic correcting abstracts a person area (See Translation, page 4, ¶ 0014), compares a size of the person area in said image data with a predetermined size, and changes the size of an image based on the size of the person area so that the size of the person area is the predetermined size (See translation, page 2, ¶ 0006 – page 3, ¶ 0007; page 4, ¶ 0014 and ¶ 0019 – page 5, ¶ 0020). Comparing a size of the person area in said image data with a predetermined size, and changing the size of an image based on the size of the person area so that the size of the person area is the predetermined size is advantageous because it would produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification, such as a passport and a license.

Therefore, taking the combined teaching of Belucci in view of Yamamoto as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Belucci by sizing the image based on a size of the person area of the image such that the size of the person area is a predetermined person area size. The motivation to do so would have been to produce in more detail the photograph with which the face image became specification size about the equipment, which produces the photograph used for certification as suggested by Yamamoto (See Translation, page 2, ¶ 0001).

The combined teaching of Belucci in view of Yamamoto fails to teach dividing the image data into an area such that two adjoining pixels are in the same area if a

difference in data between the two adjoining pixels is smaller than a predetermined threshold.

However, Blank teaches a method of detecting the background of an image, wherein the image of a person (Fig. 1: 22) is taken using a reference background (Fig. 1: 24) of a predetermined pattern and color, said background is stored in the system (Fig. 1: 10), wherein a processor (transputer shown in fig. 3: 44) compares the pixels of the image starting from the gamma of the upper left pixel with the gamma of the next pixel in the top row of the video image (Fig. 5A: 54) and so on (See fig. 4) in order to determine whether the pixel belongs to the background or to the person area. Blank also teaches dividing the image into a plurality of areas (the areas are stored in the system and used to compare the pixel values to classify them as person area or background area; col. 6, lines 21-35; col. 10, lines 20-29 and lines 58-65). Blank also teaches determining that the adjoining pixels belong in the same area if the compared properties of the adjoining pixels are less than predetermined thresholds for each property compared (See Blank, col. 7, line 65 – col. 8, lines 14) (Col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

Therefore, taking the combined teaching of Belucci in view of Yamamoto and further in view of Blank as a whole, it would have been obvious to one of ordinary skill in the art a the time the invention was made to modify the identification photo system by dividing the image data into an area such that two adjoining pixels are in the same area if a difference in data between the two adjoining pixels is smaller than a predetermined

threshold. The motivation to do so would have been to properly separate the background areas from the person's area as suggested by Blank (Col. 2, lines 36-46).

The combined teaching of Belucci in view of Yamamoto and further in view of Blank fails to teach that the characteristic value of the area includes an average luminance, an average chromaticity Cb, and an average chromaticity Cr of the area.

However, the use of an average luminance, an average chromaticity Cb, and an average chromaticity Cr of the area as a characteristic value to detect skin colors and detect facial areas is notoriously well known in the art as taught by Nishimura. Nishimura teaches a video camera (See fig. 1) comprising a feature of object extraction using the average luminance, an average chromaticity Cb, and an average chromaticity Cr of the area (As shown in fig. 3) (Col. 2, lines 10-61; col. 4, line 58 – col. 5, line 9; col. 6, line 36 – col. 7, line 25, col. 9, line 38 – col. 10, line 54). The use of luminance values with chromaticity values to extract a predetermined object from an image is advantageous because it would help extracting the object in stabilized conditions even when changes in luminance are produced.

Therefore, taking the combined teaching of Belucci and Yamamoto in view of Blank and further in view of Nishimura as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the identification photo system by using the average luminance, an average chromaticity Cb, and an average chromaticity Cr of the area as a characteristic value to detect skin colors and detect facial areas. The motivation to do so would have been to help extracting the

object in stabilized conditions even when changes in luminance are produced as suggested by Nishimura (Col. 2, lines 15-22).

Regarding claim 41, limitations can be found in claim 40.

Regarding claim 42, claim 42 is written as a Markush type claim by using the expression "...the predetermined reference background area includes at least one corner area of the image data or an area out of an oval that is smaller than the image with its center at a center of the image data." (see lines 2-4), meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

The combined teaching of Belucci and Yamamoto in view of Blank and further in view of Nishimura as applied to claim 40 teaches that the predetermined reference background area includes one corner area of the image data (See Blank, col. 6, lines 21-35 and 56-66; col. 7, lines 43-54 and line 65 – col. 8, line 14; col. 8, line 15 – col. 9, lines 14).

Regarding claim 51, the combined teaching of Belucci and Yamamoto in view of Blank and further in view of Nishimura as applied to claim 40 teaches allowing a user to select the predetermined person area size from a plurality of predetermined person area sizes prior to sizing the image, wherein in the step of sizing the image comprises sizing the image based on the selected predetermined person area size (See Yamamoto,

Translation, pages 2-3, ¶ 0007; see also page 2, ¶0002). Grounds for rejecting claim 40 apply here.

Regarding claim 56, limitations can be found in claim 40.

12. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belucci, Patent 5,913,542 B1, Yamamoto et al., JP 06-123197 A and Blank, US Patent 5,345,313 in view of Nishimura, US Patent 5,412,487 and further in view of Daly, US Patent 6,173,069 B1.

Regarding claim 43, the combined teaching of Belucci and Yamamoto in view of Blank and further in view of Nishimura fails to teach that the step of detecting the background area includes determining that the area is the background area if a number of pixels in the area is larger than a first predetermined threshold or smaller than a second predetermined threshold.

However, Daly teaches a method of detecting the face of a person in an image, wherein the face area belongs to and circle area (See circle areas 50 and 52 with the center at the center of the image) with a radius larger than the radius of a circle (See fig. 3: 50) but less than the radius of a larger circle (See fig. 3: 52) (See col. 7, line 37 – col. 8, line 15; col. 8, line 16 – col. 9, line 45) (By teaching this Daly teaches that the areas outside the circle 52 and inside the circle 50 are considered background). Although, Daly teaches measuring the areas with a circle radius and not by number of pixels, it is understood that by using a circle radius it is also defining an area composed of a

predetermined amount of pixels to be compared with the area to be tested to determine if is a background's area or a person's area.

Therefore, taking the combined teaching of Belucci, Yamamoto and Blank in view of Nishimura and further in view of Daly as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the identification photo system by detecting the area as the background area if a number of pixels in the area is larger than a first predetermined threshold or smaller than a second predetermined threshold. The motivation to do so would have been to accelerate the process of detecting facial and background areas since said facial and background areas are identified using larger regions as opposed to a pixel-by-pixel comparison.

Regarding claim 44, limitations can be found in claim 43.

13. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa, Patent 5,296,945, Belucci, Patent 5,913,542 B1, Yamamoto et al., JP 06-123197 A and Matsugu, US Patent 6,987,535 B1 in view of Blank, US Patent 5,345,313 and further in view of Daly, US Patent 6,173,069 B1.

Regarding claim 38, the combined teaching of Nishikawa, Yamamoto and Belucci in view of Matsugu and further in view of Blank fails to teach that the automatic correcting device is configured to detect the area as the background area if a number of pixels in the area is larger than a first predetermined threshold or smaller than a second predetermined threshold.

However, Daly teaches a method of detecting the face of a person in an image, wherein the face area belongs to and circle area (See circle areas 50 and 52 with the center at the center of the image) with a radius larger than the radius of a circle (See fig. 3: 50) but less than the radius of a larger circle (See fig. 3: 52) (See col. 7, line 37 – col. 8, line 15; col. 8, line 16 – col. 9, line 45) (By teaching this Daly teaches that the areas outside the circle 52 and inside the circle 50 are considered background). Although, Daly teaches measuring the areas with a circle radius and not by number of pixels, it is understood that by using a circle radius it is also defining an area composed of a predetermined amount of pixels to be compared with the area to be tested to determine if is a background's area or a person's area.

Therefore, taking the combined teaching of Nishikawa, Belucci, Yamamoto and Matsugu in view of Blank and further in view of Daly as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the identification photo system by detecting the area as the background area if a number of pixels in the area is larger than a first predetermined threshold or smaller than a second predetermined threshold. The motivation to do so would have been to accelerate the process of detecting facial and background areas since said facial and background areas are identified using larger regions as opposed to a pixel-by-pixel comparison.

Regarding claim 39, limitations can be found in claim 38.

Allowable Subject Matter

14. Claims 9, 19, 48, 53, 25, 27, 28, 30-34, 50 and 55 are allowed.

15. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 9, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, including all the elements of the present claim, that the reference background area includes at least one corner area of the image data.

Regarding claim 25, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, including all the elements of the present claim, that the reference background area includes at least one corner of the image and wherein the step of determining whether or not the each area of the plurality of areas belongs in the background area based on the comparison of the each area with the reference background area includes determining that the each area belongs in the background area if a difference between an average luminance value of the pixels of the each area and an average luminance value of the reference background area is within a predetermined luminance difference threshold and a difference between an average chromaticity value of the pixels of the each area and an average chromaticity value of the reference background area is within a predetermined chromaticity difference threshold, or a difference between an average red (R) value of the pixels of the each of the reference background area is within a area and an average R value predetermined R difference threshold, a difference between an average green

(G) value of the pixels of the each area and an average G value of the reference background area is within a predetermined G difference threshold and a difference between an average blue (B) value of the pixels of the each area and an average B value of the reference background area is within a predetermined B difference threshold.

Conclusion

16. Because new grounds of rejection have been made to claims 1 and 10 this Office Action is made **Non-Final**.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Nelson D. Hernandez
Examiner
Art Unit 2622

NDHH
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